

Online Appendix 2: Inter-rater reliability of AMSTAR 2 items and references for studies included in the analyses

	Raters 1 and 2 (20 reviews: studies of multiple interventions and associations) Supplementary references 1-20			Raters 3 and 4 (14 reviews: studies of interventions to improve medication safety) Supplementary references 21-34			Raters 5 and 6 (20 reviews: studies of therapies in Parkinson's Disease) Supplementary references 35-54		
Item	Cohen Kappa	95% confidence interval	Observed (O) and Expected (E) Agreement (%)	Cohen Kappa	95% confidence interval	Observed (O) and Expected (E) Agreement (%)	Cohen Kappa	95% confidence interval	Observed (O) and Expected (E) Agreement (%)
1	0.69	0.37, 1.0	O 85.7 E 54.0	#	**	O 100 E 100	0.86	0.60, 1.0	O 95 E 64
2	0.38	0.06, 0.81;	O 92.9 E 88.6	1.0	1.0, 1.0	O 92.9 E 48.2	0.64	0.01, 1.0	O 95 E 86
3	0.39	0.05, 0.83;	O 76.2 E 61.2	0	**	O 92.9 E 92.9	0.71	0.34, 1.0	O 90 E 65.5
4	0.61	0.30, 0.93;	O 81 E 51	0.31	-0.11, 0.73	O 71.4 E 58.7	0.77	0.47, 1.0	O 95 E 78
5	0.72	0.44, 1.0;	O 85.7 E 49.0	0.85	0.57, 1.0	O 92.9 E 52	0.69	0.41, 0.98	O 80 E 35
6	0.63	0.32, 0.93;	O 81.0 E 49.2	0.71	0.33, 1.0	O 85.7 E 51	0.80	0.53, 1.0	O 90 E 50.5
7	0.34	-0.13, 0.81;	O 78.6 E 67.5	0.76	0.31, 1.0	O 92.9 E 70.4	0.73	0.44, 1.0	O 90 E 61.8
8	0.78	0.51, 1.0;	O 95.2 E 78.2	0.75	0.47, 1.0	O 92.9 E 71.4	0.51	0.22, 0.81	O 70 E 38.3
9 (RCT)	0.48	0.22, 0.73;	O 82.5 E 66.7	0.90	0.69, 1.0	O 96.4 E 65.8	0.47	0.15, 0.79	O 80 E 62
9 (NRSI)	0.63	0.25, 1.0;	O 90.5 E 74.5	0.81	0.55, 1.0	O 92.9 E 62.8	0.52	0.30, 0.75	O 75 E 47.5
10	0	**	O 95.2 E 95.2	0	**	O 85.7 E 85.7	0.81	0.52, 1.0	O 95 E 73
11 (RCT)	0.72	0.44, 1.0;	O 90.5 E 66.0	0.86	0.59, 1.0	O 92.9 E 50	0.89	0.71, 1.0	O 95 E 52.8
11 (NRSI)	0.92	0.79, 1.0	O 98.4 E 78.8	0.72	0.26, 1.0	O 85.7 E 49	0.72	0.46, 0.98	O 85 E 45.8

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12	0.43	0.01, 0.84	O 78.6 E 62.5	1.0	1.0, 1.0	O 100 E 40	0.71	0.45, 0.97	O 85 E 48.8
13	0.71	0.45, 0.98	O 85.7 E 50.6	0.85	0.56, 1.0	O 92.3 E 49.7	0.59	0.23, 0.94	O 80 E 51.5
14	0.90	0.70, 1.0	O 95.2 E 54	0.85	0.57, 1.0	O 92.9 E 52	0.77	0.52, 1.0	O 92.5 E 67
15	0.63	0.25, 1.0	O 85.7 E 61.2	1.0	1.0, 1.0	O 100 E 75.5	0.62	0.15, 1.0	O 90 E 74
16	0.83	0.52, 1.0	O 95.2 E 71.4	0.59	0.11, 1.0	O 85.7 E 66.3	0.76	0.45, 1.0	O 90 E 58

Not calculated – division by zero

** Confidence interval not calculated

Supplementary references used in assessing inter-rater agreement

Systematic reviews appraised by raters 1 and 2 (mixture of interventions and settings)

1. Ansaloni L, Catena F, Coccolini F, Ercolani G, Gazzotti F, Pasqualini E, Pinna AD. Surgery versus conservative antibiotic treatment in acute appendicitis: a systematic review and meta-analysis of randomized controlled trials. *Digestive surgery*. 2011 May 3;28(3):210-21.
2. Barron SJ, Del Vecchio MT, Aronoff SC. Intravenous immunoglobulin in the treatment of Stevens–Johnson syndrome and toxic epidermal necrolysis: a meta-analysis with meta-regression of observational studies. *International journal of dermatology*. 2015 Jan 1;54(1):108-15.
3. Brown C, Subramanian V, Wilcox CM, Peter S. Somatostatin analogues in the treatment of recurrent bleeding from gastrointestinal vascular malformations: an overview and systematic review of prospective observational studies. *Digestive diseases and sciences*. 2010 Aug 1;55(8):2129-34.
4. Forst T, Hanefeld M, Jacob S, Moeser G, Schwenk G, Pfützner A, Haupt A. Association of sulphonylurea treatment with all-cause and cardiovascular mortality: A systematic review and meta-analysis of observational studies. *Diabetes and Vascular Disease Research*. 2013 Jan 4:1479164112465442.
5. Hongliang Y, Yin L, Jiang X, Sun X, Wu J, Tian H, Gao X, He X. Effect of metformin on cancer risk and treatment outcome of prostate cancer: a meta-analysis of epidemiological observational studies. *PloS one*. 2014 Dec 29;9(12):e116327.

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13. Musso G, Gambino R, Cassader M, Pagano G. A meta-analysis of randomized trials for the treatment of nonalcoholic fatty liver disease. *Hepatology*. 2010 Jul 1;52(1):79-104.
14. Petersen LK, Christensen K, Kragstrup J. Lipid-lowering treatment to the end? A review of observational studies and RCTs on cholesterol and mortality in 80+-year olds. *Age and ageing*. 2010 Nov 1;39(6):674-80.
15. Reich K, Burden AD, Eaton JN, Hawkins NS. Efficacy of biologics in the treatment of moderate to severe psoriasis: a network meta-analysis of randomized controlled trials. *British Journal of Dermatology*. 2012 Jan 1;166(1):179-88.
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Systematic reviews appraised by raters 3 and 4 (interventions to improve medication safety)

21. Acheampong F, Anto BP, Koffuor GA. Medication safety strategies in hospitals—a systematic review. *International Journal of Risk & Safety in Medicine.* 2014 Jan 1;26(3):117-31.
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Systematic reviews appraised by raters 5 and 6 (therapies for Parkinson's Disease)

35. Aguiar LPC, da Rocha PA, Morris M. Therapeutic Dancing for Parkinson's Disease. *International Journal of Gerontology* 2016;10(2):64-70.
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48. Liu J, Wang Ln. Mitochondrial enhancement for neurodegenerative movement disorders: a systematic review of trials involving creatine, coenzyme Q10, idebenone and mitoquinone. *CNS drugs* 2014;28(1):63-8.
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50. Ni X, Liu S, Lu F, Shi X, Guo X. Efficacy and safety of Tai Chi for Parkinson's disease: a systematic review and meta-analysis of randomized controlled trials. *PLoS One* 2014;9(6):e99377.
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